

What is claimed is:

1. An invisible information recording method comprising:

recording a digital image on a blank on a sheet of paper;  
and

recording information in the form of pixels so sized as to be invisible to a naked eye and at a print density invisible to the naked eye.

2. The invisible information recording method according to claim 1, wherein each of the pixels so sized as to be invisible to the naked eye is 75 $\mu$ m or less in diameter.

3. The invisible information recording method according to claim 2, wherein each of the pixels so sized as to be invisible to the naked eye corresponds to one or a plurality of image forming elements used for a device for forming a digital image.

4. The invisible information recording method according to claim 1, wherein each of the pixels so sized as to be invisible to the naked eye is printed using a yellow color developer.

5. The invisible information recording method

according to claim 4, wherein the yellow color developer is formed of an ink or toner.

6. The invisible information recording method according to claim 1, wherein each of the pixels so sized as to be invisible to the naked eye is printed using an ultraviolet rays color developer.

7. The invisible information recording method according to claim 6, wherein the ultraviolet rays color developer is formed of an ink or toner.

8. The invisible information recording method according to claim 2, wherein a print density invisible to the naked eye is such that the pixels each so sized as to be invisible to the naked eye are coarsely distributed and an image density is 0.1 or less.

9. The invisible information recording method according to claim 1, wherein each print density invisible to the naked eye is such that such a block that one or a plurality of image forming elements of a digital image forming apparatus is a representative point in a unit consisting of 16 image forming elements is a recording unit.

10. The invisible information recording method according to claim 9, wherein adjacent six recording units form one significant block, and information is recorded in the significant block.

11. The invisible information recording method according to claim 10, wherein at least one of the significant blocks is a recording unit which always represents "1".

12. The invisible information recording method according to claim 10, wherein at least one of the significant blocks is a recording unit representative of a parity check.

13. The invisible information recording method according to claim 1, wherein such information formed by coarsely distributing the pixels each so sized as to be invisible to the naked eye so as to have a print density invisible to the naked eye is recorded into a plurality of locations on one page of a digital image.

14. A recording apparatus for recording invisible information on a sheet of paper according to any one of claims 1 to 11.

15. A printing system including an archiving printer which prints a document upon receipt of a request of printing the document, and at the same time stores the document as document data into an archive, and upon receipt of a request of reprinting the document stored, reprints the document by using the document data stored in the archive, the archiving printer comprising:

a recording section for recording archive management information on storage locations of documents in the archiving printer in to a part of a document when the document is printed, in a state that the information is invisible to the human eye or needs a careful watching to see the information;

a reading section for reading out the information being recorded in the printed document in a state that the information is invisible to the human eye or needs a careful watching to see the information, by reproducing the document printed by the archiving printer by means of reproducing means; and

a knowing section for knowing the archive management information of the printed document from the read out information.

16. The printing system according to claim 15, wherein the recording section embeds the archive management information of the document at the time of printing the document in a state that the information is invisible to the human eye or needs a careful watching to see the information;

the recording section records one and the same information into a plurality of locations; and

the reading section includes an optical scanning section for scanning at least a part of the document.

17. The printing system according to claim 15, wherein the recording section records the archive management information of the document at the time of printing the document in a state that the information is invisible to the human eye or needs a careful watching to see the information;

the recording section records one and the same information into a plurality of locations; and

the reading section includes an optical scanning section for scanning at least a part of the document.